

## **ABSTRACT**

**THESIS:** Effects of Carbohydrate Supplementation on Variable-Intensity Exercise  
Responses in Boys and Men

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This study examined the physiological and perceptual effects of carbohydrate (CHO) on variable-intensity exercise (VIE) in boys and men. It was hypothesized that CHO would increase RER in boys and men and that this increase would be greater in boys. Additionally, it was hypothesized that RPE would be attenuated by CHO. Five boys (10-12 years) and seven men (18-30 years) consumed CHO or a placebo (PL) beverage before and throughout VIE. VIE included three 12-min sets of cycling; intensity varied every 20-30 seconds between 25, 50, 75, and 125%  $\text{VO}_{2\text{max}}$ . Boys' post-exercise glucose was higher in the CHO trial than the PL trial and RER was lower in boys than men, but was not affected by trial. RPE increased over time but was not different between groups or trials. Though VIE responses varied between boys and men, CHO ingestion before and during VIE did not provide physiological or perceptual benefits.